1. A method of detecting a characteristic of an optical device having at least two optical inputs and two optical outputs comprising:

coupling a light source to said device through a switch which has at least one input and at least two outputs, the at least two outputs of said switch being coupled to the two inputs of said device; and

coupling each of the two outputs of said device to a different detector.

2. The method of claim 1 including coupling said light source to said switch through a polarization controller.

3. The method of claim 2 including coupling said light source to said optical switch through a polarization controller that generates the four Mueller polarization states.

4. The method of claim 1 including scanning the four Mueller polarization states to the first input and detecting both outputs of said device.

5. The method of claim 4 including after scanning the four polarization states to the first input and both outputs, scanning the four polarization states to the second input and detecting both outputs.

6. The method of claim 1 including providing a light output to said detectors simultaneously.

7. A test apparatus for detecting a characteristic of an optical device having at least two optical inputs and two optical outputs, said apparatus comprising:

a light source;

a 1 x at least 2 optical switch coupled to receive light from said light source, said optical switch having at least two outputs coupled to said at least two optical inputs of said device; and

at least two photo detectors each of which is coupled to a different one of said at least two optical outputs.

8. The apparatus of claim 7 including a polarization controller coupled between said light source and said optical switch.

9. The apparatus of claim 8 wherein said polarization controller successively generates the four Mueller polarization states.

10. The apparatus of claim 8 wherein said optical switch provides a signal to a first optical input of said device and outputs are detected at each of said photo detectors simultaneously.

11. A method comprising:

providing a light source to a polarization controller;

generating different polarization states from said polarization controller;

successively providing said polarization states to a first input port of a device under test;

simultaneously providing outputs from said device under test to at least two different photodetectors; and

thereafter successively providing different polarization states to a second input port of said device under test and simultaneously detecting output signals from two different output ports of said device under test.

12. The method of claim 11 including generating the four Mueller polarization states.

13. The method of claim 11 including providing a 1 x at least 2 optical switch between said polarization controller and the at least two input ports of said device under test.

14. An optical measurement system comprising:

a light source;

a polarization controller to produce different polarization states;

at least two photodetectors; and

an element to successively provide different polarization states to a first input port of a device under test and to simultaneously provide outputs from said device under test to said photodetectors and to thereafter successively provide different polarization states to a second input port of a device under test and simultaneously detect output signals from two different output ports of said device under test.

15. The system of claim 14 wherein said controller is a Mueller polarization state generating controller.

16. The system of claim 15 wherein said element includes a 1 x at least 2 optical switch.

17. An optical measurement system comprising:

a light source;

a polarization controller coupled to said light source to produce at least four Mueller polarization states;

a 1 x at least 2 optical switch coupled to the output of said polarization controller and connectable to at least two input ports of a device under test; and

at least two photo detectors connectable to different ones of at least two output ports of a device under test.

18. The system of claim 17 wherein said first and second photo detectors are arranged to simultaneously detect outputs from said device.

19. The system of claim 18 wherein said controller is set to successively generate said four Mueller polarization states.